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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/817,142	04/05/2004	James W. Rollins	066110-012	1501

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EXAMINER

KIM, SANG K

ART UNIT PAPER NUMBER

3654

DATE MAILED: 02/28/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/817,142

Applicant(s)

ROLLINS ET AL.

Examiner

SANG KIM

Art Unit

3654

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>4/5/04</u> . | 6) <input type="checkbox"/> Other: ____. |

Drawings

The drawings are objected to because Figures 18 and 19 fails to clearly show how the springs 98 are connected with respective hooks. Also, please identify which element is considered to be a keyed and a slotted locking member. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Art Unit: 3654

Claims 1-20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1 and 12 are indefinite and vague because each semi-circular leaf element is coupled to each respective first and second couplings. Thus, two semicircular leaf elements cannot be coupled to one first coupling and one second coupling since it requires at least two first and second couplings.

Claims 10-11 and 19-20 are indefinite and vague. Examiner cannot determine which elements are “keyed” and “slotted” locking members since applicant defines a “keyed” or “slotted” locking feature as undercuts 116 adjacent to the edges of faces 74, 76, 78, see paragraph [0045]. Is applicant referring to two separate elements or only one element?

Because of the indefiniteness, claims 10-11 and 19-20 cannot be meaningfully treated with respect to the prior art at this time. An absence of an art rejection does not constitute the indication of allowance subject matter.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Art Unit: 3654

Claims 1-6, 8, 12-15, 17 are rejected under 35 U.S.C. 102(b) as being anticipated by Gaudin, U.S. Patent No. 3414210.

With respect to claims 1 and 12, Gaudin '210 shows a generally cylindrical expansible mandrel comprising:

A generally cylindrical inner body (1) having a longitudinal axis and at least one first coupling element (9); at least two semi-circular leaf elements (8) being movably coupled to said first coupling element (9) of said inner body (1) by means of at least one second coupling element (using a base of bore 10), said leaf elements (8) together substantially forming an outer profile of said generally cylindrical expansible shaft; and at least one thrusting element (14) being disposed between said leaf elements and said inner body to move said leaf elements radially outwards relative to said longitudinal axis to increase an outer diameter of said shaft when in a first configuration and move radially inwards relative to said longitudinal axis to decrease said outer diameter of said shaft when in second configuration, see figures 1-4.

With respect to claims 2-3 and 13-14, Gaudin '210 shows said leaf elements being resiliently biased radially inwards by means of a spring (11), see figure 1.

With respect to claims 4-5 and 15, Gaudin '210 shows the first and second couplings elements being complementary hooks by using a base of bore 10 to hook against a head portion of the guide pin 9, see figure 4.

With respect to claim 6, Gaudin '210 shows three-semi-circular leaf elements, see figures 1-4, and on column 2, lines 37-43.

Art Unit: 3654

With respect to claims 8 and 17, Gaudin '210 shows an air journal by using a drive shaft 2 that has an axial duct 5 for transferring air, and removably coupled with said inner body (1) by attaching/removing the guide pins (9), and including an intake opening (5) for permitting air to be supplied to said thrusting element (14) for moving said leaf elements (8) to said first configuration, see figure 1.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 7 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gaudin, U.S. Patent No. 3414210, in view of Matsuda et al., U.S. Patent No. 5480022.

With respect to claims 7 and 16, Gaudin '210 does not explicitly state that the outer surface of the leaf elements include a plurality of knurls for frictional engagement.

Matsuda '022 teaches changing the surface configuration from smooth to knurl, see column 11, lines 1-7.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the surface of leaf into a plurality of knurls to increase friction as taught by Matsuda, in order to help engage and grip the material.

Claims 9 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gaudin, U.S. Patent No. 3414210

Gaudin '210 uses one axial duct 5 to intake and remove air.

Having separate ducts for inputting and removing air are notoriously old and well known for operating and manufacturing apparatus of all expansible mandrels. It would have been obvious to one having ordinary skill in the art at the time the invention was made to use separate ducts to intake or remove air faster to increase a cycle time.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to SANG KIM whose telephone number is 571-272-6947. The examiner can normally be reached Monday through Friday from 8:00 A.M. to 5:30 P.M. alternating Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kathy Matecki, can be reached on (571) 272-6951. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only.

Art Unit: 3654

For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

SK

2/8/06

Kathy Matecki

KATHY MATECKI
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3600